

What's That White Stuff?

You will be given a sample of an unknown substance. Describe your observations of this substance. Take one level spoonful of your sample and dissolve it into approximately 100ml of water. We will call this your solution.

Obtain another container and place approximately 100ml of water in it. We will call this your experimental sample. Be sure you have some way to keep the two containers apart.

Now set up your data collection system. Plug in the conductivity probe to Channel 1. If your conductivity probe has a switch for different settings, be sure it is set on the mid-range setting. The system should auto ID the probe and set up a file for conductivity. Configure your experiment to the **Events with Entry** mode. The Event will be **number of drops** (and there will be no unit).

Place your conductivity probe into the experimental sample and stir it around. Wait for the reading to stabilize and click the **Keep** button. The software should prompt you for the number of drops. Since you have not added any yet, enter 0 and press OK. **Do not** press the **Stop** button until you have completed the entire experiment.

Add 2 drops from the solution to the experimental sample. Stir with the probe and then press **Keep**. The software should prompt you for the number of drops. Enter 2 and press OK.

Add two more drops, stir and hit **Keep**. When the software prompts you for number of drops enter 4 and press OK. You are entering the total number of drops added.

Continue the process for 6, 8, 10 and 12 drops. After you have completed 12 drops, hit **Stop**.

Adjust the scaling on your graph until you can see all the data points. You might use Autoscale, Autoscale from 0 or a Manual Scale. Ask your teacher if you are uncertain.

Sketch what your graph looks like and write a brief explanation of what the graph indicates.

We will share results from other groups. Comment on how their results compare with yours. How would you explain this? Use examples from class.